

WHAT IS CLAIMED IS:

1. A receptacle type optical module comprising:
 - a lead frame having a plurality of leads;
 - a block mounted on said lead frame, said block having a through hole;
 - a ferrule inserted and fixed in said through hole of said block, said ferrule having an optical fiber;
 - a carrier mounted on said block, said carrier having a wiring pattern;
 - an optical element mounted on said carrier;
 - a graded index lens fixed to an end face of said ferrule, said graded index lens having a spherical end face adjacent to said optical element; and
 - a transparent resin for sealing an optical coupling portion between said optical element and said graded index lens.
2. A receptacle type optical module according to claim 1, wherein said block has an L-shape.
3. A receptacle type optical module according to claim 1, further comprising resin flow blocking means provided on said block.
4. A receptacle type optical module according to claim 3, wherein said resin flow blocking means is formed of a resin having a viscosity higher than that of said

transparent resin.

5. A receptacle type optical module comprising:
 - a lead frame having a plurality of leads;
 - an L-shaped block mounted on said lead frame, said L-shaped block having a through hole;
 - a ferrule inserted and fixed in said through hole of said L-shaped block, said ferrule having an optical fiber;
 - a carrier mounted on said L-shaped block, said carrier having a wiring pattern;
 - an optical element mounted on said carrier;
 - a graded index lens fixed to an end face of said ferrule, said graded index lens having a spherical end face adjacent to said optical element;
 - a transparent resin for sealing an optical coupling portion between said optical element and said graded index lens; and
 - a resin molded package for encapsulating all of said lead frame, said L-shaped block, said ferrule, said carrier, and said optical element except a part of said lead frame and a part of said ferrule.

6. A production method for a receptacle type optical module, comprising the steps of:

mounting an optical element on a carrier having a

wiring pattern;

connecting said wiring pattern of said carrier and said optical element by means of a first wire;

performing a screening test for said optical element;

preparing an L-shaped block having a through hole;

press-fitting a ferrule having an optical fiber into said through hole of said L-shaped block;

mounting said carrier on said L-shaped block in the condition where said optical element is mounted on said carrier;

bonding a graded index lens to an end face of said ferrule after aligning said graded index lens to said optical fiber and said optical element;

mounting said L-shaped block on a lead frame;

connecting said wiring pattern of said carrier and said lead frame by means of a second wire;

sealing an optical coupling portion between said optical element and said graded index lens with a transparent resin; and

encapsulating all of said lead frame, said L-shaped block, said ferrule, said carrier, and said optical element except a part of said lead frame and a part of said ferrule in a resin molded package.

7. A production method according to claim 6,
further comprising the step of cutting said lead frame
after said encapsulating step to form a plurality of
leads.

8. A production method according to claim 6,
further comprising the step of applying a resin having a
viscosity higher than that of said transparent resin onto
said L-shaped block before said sealing step to form a
dam for blocking the flow of said transparent resin.